

1 **Supplemental Table S1: Overview of extracted factors, corresponding statements, and**
 2 **statistics from factor analysis (n = 277).**

Item	Factors with statements	FL
BI: $C\alpha = 0.919$		
BI1	I am generally willing to provide digital animal welfare data to advisors and veterinarians.	0.901
BI2	I am generally willing to provide digital animal welfare data anonymously for agricultural consultancy.	0.893
BI3	If the conditions are right, I will participate in a future digital animal welfare certification program.	0.841
BI4	I am generally willing to provide digital animal welfare data to private animal welfare programs.	0.817
BI5	I am generally willing to provide digital animal welfare data to state control institutions.	0.745
BI6	I would only provide my digital animal welfare data anonymously.	0.665
ATT: $C\alpha = 0.912$		
ATT1	Overall, I think providing digital animal welfare data is advantageous.	0.904
ATT2	In my opinion, it is very desirable to provide digital animal welfare data.	0.895
ATT3	The provision of digital animal welfare data is generally useful for farmers.	0.846
PE F: $V = 35.1\%$; $C\alpha = 0.919$		
PE F3	Providing digital animal welfare data saves me time.	0.834
PE F2	Providing digital animal welfare data makes my workday easier.	0.809
PE F1	I find providing digital animal welfare data useful for my farm processes.	0.803
PE F4	Providing digital animal welfare data reduces documentation workload.	0.754
PE F5	Providing digital animal welfare data is fair, as all farms are evaluated equally.	0.628
PE F6	Digital animal welfare data minimize subjective influences compared with human controls.	0.596
PE F7	Digital animal welfare data enable equal evaluation of all farms.	0.507
PE C: $V = 4.6\%$; $C\alpha = 0.896$		
PE C1	Providing digital animal welfare data increases consumer trust in agriculture.	0.832
PE C2	Providing digital animal welfare data increases consumer trust in animal welfare standards.	0.788
PE C3	Providing digital animal welfare data increases transparency for consumers.	0.741
EE: $V = 16.6\%$; $C\alpha = 0.915$		
EE1	Using technologies for digital animal welfare measurement is easy for me.	0.822
EE6	Providing digital animal welfare data is easy for me.	0.793
EE3	It is easy for me to learn how to use technologies for digital animal welfare measurement.	0.787
EE4	My first impression of using technologies for digital animal welfare measurement is clear and understandable.	0.783
EE2	I have the necessary resources to provide digital animal welfare data.	0.745

EE5	I have the necessary knowledge to provide digital animal welfare data.	0.718
EE7	It is easy for me to learn how to provide digital animal welfare data.	0.699
EE8	I already use technologies to monitor animal health.	0.623
SI: V = 2.5%; Cα = 0.828		
SI3	I think the retail sector would approve if I provided my digital animal welfare data.	0.811
SI2	I think the government would approve if I provided my digital animal welfare data.	0.794
SI1	I think society would approve if I provided my digital animal welfare data.	0.704
TR: V = 3.3%; Cα = 0.914		
TR1	I trust that my digital animal welfare data will not be misused.	0.801
TR2	I trust that my digital animal welfare data will not be shared with third parties.	0.747
TR3	I trust that my digital animal welfare data will be evaluated fairly.	0.608
TR4	I would agree to my digital animal welfare data being accessed at any time.	0.546
AttAw: V = 6.3%; Cα = 0.939		
AttAw1	In my opinion, it is very desirable to participate in an animal welfare program.	0.751
AttAw2	Participation in an animal welfare program is fundamentally reasonable for farmers.	0.688
AttAw3	Overall, I have positive feelings about participating in an animal welfare program.	0.683
AttAw4	Overall, I think that participating in an animal welfare program is advantageous.	0.683

Notes: The model explains 68.48% of the variance; BI = Behavioral intention; ATT = Attitude; PE F = Performance expectancy (farm); PE C = Performance expectancy (consumer); EE = Effort expectancy; SI = Social influence; TR = Trust; AttAw = Attitudes towards animal welfare programs; V = proportion of total variance explained (unrotated solution); C α = Cronbach's alpha; FL = factor loading; the statements used a five-point Likert scale ranging from 1 = 'Fully disagree' to 5 = 'Fully agree'.

4 **Supplemental Table S2: Reliability and validity metrics of the PLS-SEM model for**
5 **farmers' acceptance of animal welfare-related data sharing (n = 277).**

Item	Factors with statements	FL
BI: AVE = 0.715; Cα = 0.919; CR = 0.925		
BI1	I am generally willing to provide digital animal welfare data to advisors and veterinarians.	0.906
BI2	I am generally willing to provide digital animal welfare data anonymously for agricultural consultancy.	0.900
BI3	If the conditions are right, I will participate in a future digital animal welfare certification program.	0.871
BI4	I am generally willing to provide digital animal welfare data to private animal welfare programs.	0.855
BI5	I am generally willing to provide digital animal welfare data to state control institutions.	0.805
BI6	I would only provide my digital animal welfare data anonymously.	0.724
ATT: AVE = 0.851; Cα = 0.913; CR = 0.913; VIF = 4.677		
ATT1	Overall, I think providing digital animal welfare data is advantageous.	0.930
ATT2	In my opinion, it is very desirable to provide digital animal welfare data.	0.927
ATT3	The provision of digital animal welfare data is generally useful for farmers.	0.911
PE F: AVE = 0.674; Cα = 0.919; CR = 0.924; VIF = 3.163		
PE F1	I find providing digital animal welfare data useful for my farm processes.	0.884
PE F2	Providing digital animal welfare data makes my workday easier.	0.874
PE F3	Providing digital animal welfare data saves me time.	0.840
PE F4	Providing digital animal welfare data reduces documentation workload.	0.824
PE F5	Providing digital animal welfare data is fair, as all farms are evaluated equally.	0.813
PE F6	Digital animal welfare data minimize subjective influences compared with human controls.	0.758
PE F7	Digital animal welfare data enable equal evaluation of all farms.	0.741
PE C: AVE = 0.828; Cα = 0.896; CR = 0.896; VIF = 1.596		
PE C1	Providing digital animal welfare data increases consumer trust in agriculture.	0.917
PE C2	Providing digital animal welfare data increases consumer trust in animal welfare standards.	0.913
PE C3	Providing digital animal welfare data increases transparency for consumers.	0.900
EE: AVE = 0.629; Cα = 0.916; CR = 0.927; VIF = 1.408		
EE1	Using technologies for digital animal welfare measurement is easy for me.	0.836
EE2	I have the necessary resources to provide digital animal welfare data.	0.832
EE3	It is easy for me to learn how to use technologies for digital animal welfare measurement.	0.816
EE4	My first impression of using technologies for digital animal welfare measurement is clear and understandable.	0.812
EE6	Providing digital animal welfare data is easy for me.	0.809
EE5	I have the necessary knowledge to provide digital animal welfare data.	0.799

EE7	It is easy for me to learn how to provide digital animal welfare data.	0.715
EE8	I already use technologies to monitor animal health.	0.714
SI: AVE = 0.709; Cα = 0.829; CR = 0.948; VIF = 1.271		
SI1	I think society would approve if I provided my digital animal welfare data.	0.926
SI2	I think the government would approve if I provided my digital animal welfare data.	0.863
SI3	I think the retail sector would approve if I provided my digital animal welfare data.	0.724
TR: AVE = 0.796; Cα = 0.914; CR = 0.915; VIF = 2.977		
TR1	I trust that my digital animal welfare data will not be misused.	0.929
TR3	I trust that my digital animal welfare data will be evaluated fairly.	0.904
TR2	I trust that my digital animal welfare data will not be shared with third parties.	0.903
TR4	I would agree to my digital animal welfare data being accessed at any time.	0.831
AttAw: AVE = 0.845; Cα = 0.939; CR = 0.939; VIF = 2.809		
AttAw1	In my opinion, it is very desirable to participate in an animal welfare program.	0.936
AttAw4	Overall, I think that participating in an animal welfare program is advantageous.	0.914
AttAw3	Overall, I have positive feelings about participating in an animal welfare program.	0.914
AttAw2	Participation in an animal welfare program is fundamentally reasonable for farmers.	0.913

Notes: BI = Behavioral intention; ATT = Attitude; PE F = Performance expectancy (farm); PE C = Performance expectancy (consumer); EE = Effort expectancy; SI = Social influence; TR = Trust; AttAw = Attitudes towards animal welfare programs; AVE = average variance extracted; C α = Cronbach's Alpha; CR = composite reliability (ρ_A); VIF = inner variance inflation factor (direct relationship with the dependent variable); FL = factor loading; the statements used a five-point Likert scale ranging from 1 = 'Fully disagree' to 5 = 'Fully agree'.

7 **Supplemental Table S3: Detailed results of the PLS-SEM analysis (n = 277).**

Hypothesis	Direct structural path	Effect size f ²	Path coefficients	P values	Standard error	Confidence interval ¹	
						0.025	0.975
H1+	ATT → BI	0.107	0.333	<0.001	0.073	0.189	0.476
H2.1+	PE F → BI	0.108	0.276	<0.001	0.052	0.174	0.380
H2.1a+	PE F → ATT	0.202	0.337	<0.001	0.057	0.227	0.448
H2.2+	PE C → BI	0.031	-0.105	0.011	0.041	-0.189	-0.026
H2.2a+	PE C → ATT	0.008	0.051	0.241	0.043	-0.034	0.136
H3-	EE → BI	0.088	-0.165	<0.001	0.034	-0.232	-0.096
H3a-	EE → ATT	0.004	-0.033	0.344	0.034	-0.097	0.037
H4+	SI → BI	0.027	0.087	0.025	0.039	0.010	0.161
H4a+	SI → ATT	0.014	0.061	0.077	0.034	-0.008	0.125
H5+	TR → BI	0.090	0.243	<0.001	0.055	0.137	0.348
H5a+	TR → ATT	0.278	0.372	<0.001	0.048	0.279	0.466
H6+	AttAw → BI	0.004	0.051	0.371	0.057	-0.060	0.162
H6a+	AttAw → ATT	0.094	0.227	<0.001	0.063	0.104	0.353

8 Notes: ¹Bias-corrected confidence intervals; bolded path coefficients indicate a significant impact
9 within the model, with a significance level of p < 0.05; bolded f² values indicate an effect size of
10 f² > 0.02; BI = Behavioral intention; ATT = Attitude; PE F = Performance expectancy (farm);
11 PE C = Performance expectancy (consumer); EE = Effort expectancy; SI = Social influence;
12 TR = Trust; AttAw = Attitudes towards animal welfare programs.

13

14 **Supplemental Table S4: Internal consistency: Cronbach's alpha, composite reliability and**
15 **average variance extracted of the constructs (n = 277).**

Construct	Cronbach's alpha	Composite reliability (ρA)	Average variance extracted (AVE)
BI	0.919	0.925	0.715
ATT	0.913	0.913	0.851
PE F	0.919	0.924	0.674
PE C	0.896	0.896	0.828
EE	0.916	0.927	0.629
SI	0.829	0.948	0.709
TR	0.914	0.915	0.796
AttAw	0.939	0.939	0.845

16 Notes: BI = Behavioral intention; ATT = Attitude; PE F = Performance expectancy (farm);
17 PE C = Performance expectancy (consumer); EE = Effort expectancy; SI = Social influence;
18 TR = Trust; AttAw = Attitudes towards animal welfare programs.

19

20 **Supplemental Table S5: Discriminant validity: Fornell–Larcker criterion (n = 277).**

	ATT	AttAw	BI	EE	PE F	PE C	SI	TR
ATT	0.923							
AttAw	0.761	0.919						
BI	0.818	0.700	0.846					
EE	-0.311	-0.322	-0.452	0.793				
PE F	0.800	0.733	0.769	-0.231	0.821			
PE C	0.421	0.393	0.256	0.161	0.366	0.910		
SI	0.302	0.277	0.265	0.072	0.271	0.420	0.842	
TR	0.791	0.646	0.768	-0.378	0.682	0.369	0.185	0.892

21 Notes: Bolded values indicate square root of average variance extracted (AVE); non-bolded
 22 values indicate latent variable correlations; BI = Behavioral intention; ATT = Attitude; PE F
 23 = Performance expectancy (farm); PE C = Performance expectancy (consumer); EE = Effort
 24 expectancy; SI = Social influence; TR = Trust; AttAw = Attitudes towards animal welfare
 25 programs.

26

27 **Supplemental Table S6: Discriminant validity: HTMT criterion (n = 277).**

	ATT	AttAw	BI	EE	PE F	PE C	SI	TR
ATT								
AttAw	0.823							
BI	0.890	0.748						
EE	0.326	0.335	0.487					
PE F	0.871	0.790	0.831	0.231				
PE C	0.465	0.429	0.277	0.196	0.408			
SI	0.267	0.241	0.238	0.115	0.233	0.427		
TR	0.865	0.696	0.833	0.399	0.739	0.406	0.169	

28 Notes: BI = Behavioral intention; ATT = Attitude; PE F = Performance expectancy (farm);
 29 PE C = Performance expectancy (consumer); EE = Effort expectancy; SI = Social influence;
 30 TR = Trust; AttAw = Attitudes towards animal welfare programs.

31

32 Supplemental Table S7: Cross-loadings of latent variables (n = 277).

Construct/ Item	ATT	AttAw	BI	EE	PE F	PE C	SI	TR
SI1	0.333	0.317	0.278	0.061	0.297	0.475	0.926	0.255
SI3	0.047	-0.010	0.040	0.121	-0.004	0.220	0.724	-0.027
EE8	-0.263	-0.246	-0.311	0.714	-0.197	0.017	0.068	-0.309
TR2	0.683	0.559	0.650	-0.337	0.568	0.272	0.149	0.903
ATT1	0.930	0.723	0.746	-0.300	0.730	0.410	0.277	0.725
ATT2	0.927	0.703	0.765	-0.327	0.747	0.348	0.242	0.728
TR3	0.752	0.655	0.716	-0.355	0.684	0.399	0.206	0.904
TR1	0.714	0.577	0.676	-0.368	0.596	0.281	0.089	0.929
ATT3	0.911	0.682	0.754	-0.235	0.736	0.408	0.319	0.736
AttAw4	0.715	0.914	0.629	-0.277	0.701	0.385	0.282	0.570
AttAw1	0.694	0.936	0.655	-0.304	0.673	0.348	0.224	0.592
AttAw3	0.696	0.914	0.655	-0.344	0.661	0.351	0.232	0.621
AttAw2	0.695	0.913	0.634	-0.257	0.660	0.361	0.280	0.592
PE F4	0.614	0.573	0.605	-0.220	0.824	0.269	0.176	0.543
PE F1	0.746	0.645	0.740	-0.261	0.884	0.288	0.281	0.653
PE F3	0.627	0.545	0.607	-0.218	0.840	0.254	0.191	0.526
PE F2	0.694	0.633	0.704	-0.249	0.874	0.238	0.243	0.586
PE F5	0.673	0.611	0.626	-0.153	0.813	0.320	0.243	0.583
EE6	-0.189	-0.191	-0.341	0.809	-0.069	0.202	0.060	-0.213
EE7	-0.117	-0.152	-0.266	0.715	-0.078	0.167	0.126	-0.196
PE F6	0.586	0.555	0.558	-0.108	0.758	0.330	0.204	0.461
PE F7	0.636	0.645	0.548	-0.092	0.741	0.425	0.202	0.544
PE C3	0.381	0.352	0.253	0.187	0.343	0.900	0.435	0.322
PE C2	0.370	0.378	0.235	0.132	0.353	0.913	0.353	0.327
PE C1	0.398	0.343	0.210	0.121	0.303	0.917	0.358	0.359
EE4	-0.213	-0.221	-0.391	0.812	-0.163	0.220	0.024	-0.258
EE1	-0.220	-0.247	-0.325	0.836	-0.137	0.206	0.041	-0.285
EE3	-0.234	-0.262	-0.313	0.816	-0.157	0.196	0.104	-0.294
BI6	0.518	0.395	0.724	-0.487	0.523	0.001	0.080	0.454
BI2	0.712	0.589	0.900	-0.454	0.677	0.194	0.187	0.664
TR4	0.668	0.508	0.694	-0.287	0.577	0.359	0.214	0.831
BI5	0.733	0.590	0.805	-0.289	0.643	0.300	0.231	0.718
BI4	0.727	0.641	0.855	-0.295	0.661	0.317	0.321	0.694
BI3	0.752	0.719	0.871	-0.311	0.698	0.261	0.262	0.671
BI1	0.686	0.586	0.906	-0.480	0.683	0.189	0.239	0.666
EE2	-0.316	-0.326	-0.455	0.832	-0.282	0.073	0.036	-0.395
EE5	-0.340	-0.326	-0.396	0.799	-0.286	0.013	0.039	-0.371

SI2	0.220	0.195	0.214	0.057	0.208	0.258	0.863	0.073
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33 Notes: Bolded loadings indicate loadings of items on the associated construct; BI = Behavioral
34 intention; ATT = Attitude; PE F = Performance expectancy (farm); PE C = Performance
35 expectancy (consumer); EE = Effort expectancy; SI = Social influence; TR = Trust; AttAw
36 = Attitudes towards animal welfare programs.

37

38 **Supplemental Note 1: Assessment of systematic response behavior**

39 This note provides a detailed description of the procedures used to identify systematic response
40 behavior during data cleaning.

41 Systematic response behavior was assessed using two conceptually distinct procedures that
42 served complementary purposes in the data cleaning process.

43

44 **Extreme scale use (primary indicator)**

45 As a primary response quality check, extreme scale use was examined across Likert-type
46 statements measured on a five-point response scale (1–5) that were designed as multi-item
47 measures of theoretical constructs and thus potentially eligible for inclusion in the analytical
48 model.

49 For each respondent, the proportion of these construct-related Likert statements answered with
50 the lowest (1), middle (3), or highest (5) response category was calculated. Respondents
51 exceeding a threshold of 80% identical responses at one of these scale points were classified as
52 exhibiting extreme response patterns and were excluded from further analysis. Based on this
53 criterion, five responses were removed from the dataset.

54

55 **Block-wise straightlining (secondary indicator)**

56 In addition, block-wise straightlining was assessed as a secondary indicator to evaluate response
57 behavior within the questionnaire structure. The questionnaire consisted of 11 consecutive
58 question blocks, each presented on a separate page and containing multiple items measured on
59 ordinal response scales (four- or five-point scales). For each respondent and for each block,
60 within-block response variance was calculated. A block was classified as straightlined when all
61 items within that block were answered using the same response category, resulting in a standard
62 deviation of zero ($SD = 0$). For each respondent, the number and proportion of blocks exhibiting
63 straightlining were computed.

64

65 **Combined assessment**

66 Extreme scale use served as the primary exclusion criterion. Block-wise straightlining was not
67 associated with a predefined cutoff but was used to further evaluate borderline cases falling
68 below the extreme scale-use threshold. One respondent fell slightly below the primary cutoff for
69 extreme scale use, with 78% identical midpoint responses, but simultaneously exhibited
70 pronounced block-wise straightlining, with 73% of question blocks showing zero within-block
71 variance. This value represented the second-highest straightlining proportion in the screened
72 sample ($n = 283$). Based on this combined assessment, this response was also excluded.

73

74 In total, six responses were excluded due to clearly extreme response behavior.

75

76 **Supplemental Note 2: Analytical code and reproducibility**

77 **1. Overview**

78 This supplemental note provides a complete overview of the analytical framework, software
79 environment, datasets, and code used to process and analyze the data reported in this study. All
80 materials are provided to ensure full transparency and reproducibility of the results.

81

82 **2. Software environment**

83 The analyses were conducted using the following software:

- 84 • Microsoft Excel 365 version 2601 was used as a supplementary tool during data screening
85 and data cleaning, as described in the manuscript, and for the tabular presentation and
86 graphical visualization of results. All substantive statistical analyses and model
87 estimations were conducted in SPSS and SmartPLS. No independent statistical analyses
88 were performed in Excel.
- 89 • IBM SPSS Statistics, version: version 28.0.0.0
90 Used for descriptive statistics, correlation analyses, and exploratory factor analyses
91 (EFA).
- 92 • SmartPLS, version 4.1.1.5
93 Used for partial least squares structural equation modeling (PLS-SEM).

94

95 **3. Datasets**

96 The datasets provided in the public repository correspond to the analytically relevant data stages
97 described in the manuscript. Details on survey administration, eligibility criteria, and the
98 screening and data cleaning procedures are reported in the Materials and Methods section of the
99 manuscript.

100 The dataset resulting from the eligibility screening process is referred to as the “Screened
101 Dataset” (n = 283) and includes all respondents who met the predefined inclusion criteria and
102 fully completed the questionnaire. Based on the data cleaning procedures described in the
103 manuscript and Supplemental Note 1, a “Final Dataset” (n = 277) was derived from the Screened
104 Dataset.

105 Both the Screened Dataset and the Final Dataset are provided in the public repository to ensure
106 transparency of the data preparation process and reproducibility of the reported analyses.

107

108 **4. SPSS Procedures for correlation and exploratory factor analysis**

109 In the following sections, the SPSS procedures used to conduct the correlation analyses and
110 exploratory factor analysis are documented to ensure reproducibility.

111

112 **4.1. Correlation analyses (SPSS)**

113

114 **4.1.1. Table 3. Correlation between data collection and behavioral intention**

115

116 **Analytical specification:**

- 117 • Correlation measure: Spearman’s rho
- 118 • Rationale: Ordinal measurement level of the data collection variables (scale from 1 to 4)
- 119 • Behavioral intention (BI): Arithmetic mean score of the BI items (see below)
- 120 • Dataset: Final Dataset (n = 277)
- 121 • Missing values: Pairwise deletion
- 122 • Significance testing: Two-tailed tests, $\alpha = 0.05$

123 **Variables:**

- 124 • Behavioral intention (BI_Mean): Arithmetic mean score of the BI items:
- 125 ○ v_86_Anonymous Provision
 - 126 ○ v_88_Anonymous Consultancy
 - 127 ○ v_90_Provision Control Institutions
 - 128 ○ v_91_Provision AWP
 - 129 ○ v_92_ParticipationProgramDigCertification
 - 130 ○ v_93_ProvisionAdvisorVeterinary
- 131 • v_33_CollectionHealth data
 - 132 • v_34_CollectionHousing conditions
 - 133 • v_35_CollectionProductivity indicators
 - 134 • v_36_CollectionClimate parameters
 - 135 • v_37_CollectionFeed data
 - 136 • v_38_CollectionBehavioral data

137
138 **4.1.2. Table 4. Correlation between data sharing willingness (private vs.**
139 **government) and behavioral intention**

140
141 **Analytical specification:**

- 142 • Correlation measure: Pearson's correlation (r)
- 143 • Rationale: Willingness-to-share variables were measured on a metric Likert scale (1 to 5)
- 144 • Behavioral intention (BI): Arithmetic mean score of the BI items (see Section 4.1.1)
- 145 • Dataset: Final Dataset (n = 277)
- 146 • Missing values: Pairwise deletion
- 147 • Significance testing: Two-tailed tests, $\alpha = 0.05$

148
149 **Variables:**

- 150 • Behavioral intention (BI_Mean)
 - 151 • Willingness to share data with the private sector:
 - 152 ○ v_40_Health Data
 - 153 ○ v_41_Housing conditions
 - 154 ○ v_42_Productivity indicators
 - 155 ○ v_43_Climate Parameters
 - 156 ○ v_44_Feed data
 - 157 ○ v_45_Behavioral Data
 - 158 • Willingness to share data with government sector:
 - 159 ○ v_46_Health data
 - 160 ○ v_47_Housing data
 - 161 ○ v_48_Productivity data
 - 162 ○ v_49_Climate parameters
 - 163 ○ v_50_Feed data
 - 164 ○ v_51_Behavioral Data
- 165

166 **4.2. Exploratory factor analysis (SPSS)**

167

168 **Analytical specification:**

- 169 • Dataset: Final Dataset (n = 277)
- 170 • Purpose: Exploratory assessment of the underlying factor structure of the items used in
- 171 the survey
- 172 • Missing values: Listwise deletion
- 173 • Extraction method: Principal axis factoring (PAF)
- 174 • Rotation method: Varimax rotation (orthogonal)
- 175 • Correlation matrix: Factor analysis based on the correlation matrix (METHOD =
- 176 CORRELATION)
- 177 • Sampling adequacy and factorability:
- 178 ○ Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy
- 179 ○ Bartlett’s test of sphericity
- 180 • Factor retention criteria:
- 181 ○ Eigenvalues greater than 1.0 (Kaiser criterion)
- 182 ○ Visual inspection of the scree plot
- 183 • Iteration settings: Maximum 25 iterations for convergence
- 184

185 **Variables (English description; final item set):**

186 Attitudes towards animal welfare programs (AttAw)

- 187 • v_24_Animal Welfare ProgramAdvant
- 188 • v_25_ParticipationAnimal Welfare Program
- 189 • v_29_FeelingAnimal Welfare Program
- 190 • v_30_Participation reasonable

191 Performance expectancy (farm) (PE F)

- 192 • v_68_Reduce documentation effort
- 193 • v_69_Useful Farm Process
- 194 • v_70_Time Saving
- 195 • v_71_DailyWork Easier
- 196 • v_72_Fairness
- 197 • V_76_Minimization Subjective Influences
- 198 • V_77_Eligible Evaluation

199 Performance expectancy (consumer) (PE C)

- 200 • v_78_Transparency Consumer
- 201 • v_79_Trust Consumer
- 202 • v_80_Trust Agriculture

203 Effort expectancy (EE)

- 204 • v_74_Provision Easy
- 205 • v_75_Learning Dataprovision
- 206 • v_81_Impression Clearly
- 207 • v_82_UsageTechnologies Easy
- 208 • v_83_Learning Technologies Easy
- 209 • v_104_Usage Technologies
- 210 • V_97_essential resources
- 211 • V_98_necessary knowledge

212 Social influence (SI)

- 213 • v_99_Policy
- 214 • v_100_Society
- 215 • v_102_Retail

216 Trust (TR)

- 217 • v_108_Third parties
- 218 • v_113_TrustFairEvaluation
- 219 • v_114_TrustNo misuse
- 220 • v_89_Direct access

221
222 In addition to the main exploratory factor analysis reported above, separate exploratory factor
223 analyses were conducted for the Behavioral Intention (BI) items and for the Attitude (ATT)
224 items. These analyses were performed to verify that the respective item sets formed single,
225 unidimensional factors and were not split into multiple latent dimensions.

226

227 **Variables (English description; final item set):**

228 Behavioral intention (BI)

- 229 • v_86_Anonymous Provision
- 230 • v_88_Anonymous Consultancy
- 231 • v_90_Provision Control Institutions
- 232 • v_91_Provision AWP
- 233 • v_92_ParticipationProgramDigCertification
- 234 • v_93_ProvisionAdvisorVeterinary

235 Attitude (ATT)

- 236 • v_109_Advantageous
- 237 • v_110_Desirable
- 238 • v_116_provisionUsefulFarmers

239

240 In addition, internal consistency reliability was assessed for each factor derived from the
241 exploratory factor analyses using Cronbach's alpha. Reliability analyses were conducted
242 separately for each final factor based on the corresponding item sets.

243

244 **5. SmartPLS procedures for partial least squares structural equation modeling**

245

- 246 • The PLS-SEM was estimated using the constructs and indicators documented above (see
247 Section 4.2).
- 248 • Dataset: Final Dataset (n = 277)
- 249 • No missing values were present in the Final Dataset; therefore, no missing value
250 treatment was applied in any of the SmartPLS procedures.

251

252 **5.1. PLS-SEM model estimation**

253

- 254 • Procedure: Estimation of the PLS-SEM using the specified measurement and structural
255 model.
- 256 • PLS algorithm settings:
 - 257 ○ Weighting scheme: Path weighting scheme

- 258 ○ Maximum number of iterations: 3000
- 259 ○ Stop criterion: 10^{-7}
- 260 ○ Initial weights: 1.0
- 261 ○ Lohmöller settings: Not used
- 262 ○ Type of results: Standardized
- 263 ● Outer weighting mode:
- 264 ○ Construct outer weighting modes were set to AUTOMATIC for all constructs

265 **5.2. Bootstrapping**

- 266
- 267 ● Procedure: Bootstrapping was applied to assess the statistical significance of the estimated
- 268 path coefficients and outer loadings.
- 269 ● Bootstrapping settings:
- 270 ○ Complexity: Complete (slower)
- 271 ○ Number of bootstrap samples: 5,000
- 272 ○ Test type: Two-tailed
- 273 ○ Significance level: $\alpha = 0.05$
- 274 ○ Confidence interval method: Bias-corrected and accelerated (BCa) bootstrap
- 275 ○ Parallel processing: Yes
- 276 ○ Save results per sample: No
- 277 ○ Seed: Fixed seed
- 278 ● The bootstrapping procedure was applied to the PLS-SEM model specified in Section 5.1.
- 279

280 **5.3. Predictive model assessment (PLS-Predict)**

- 281
- 282 ● Procedure: Out-of-sample predictive assessment was conducted using PLS-Predict.
- 283 ● PLS-Predict / CVPAT settings:
- 284 ○ Number of folds: 10
- 285 ○ Number of repetitions: 10
- 286 ○ Random seed: Fixed seed
- 287 ● The predictive assessment was based on the PLS-SEM model specified in Section 5.1.
- 288